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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/674,796 | 10/01/2003 | Hiroki Tawa | 107348-00372 | 4154 |

4372 7590 06/02/2004

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EXAMINER

WRIGHT, ANDREW D

| | |
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| ART UNIT | PAPER NUMBER |
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3617

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,796

Applicant(s)

TAWA ET AL.

Examiner

Andrew Wright

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 5 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/01/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to. Claim 5 recites "the support frame". There is insufficient antecedent basis for this limitation in the claim. A positive recitation of the support frame will be assumed. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonezawa (US 6,715,454) in view of Watanabe et al. (US 4,684,351). Yonezawa shows the vertical engine with crankshaft, connecting rod, piston, cylinder, cylinder block (6), cylinder head (11), combustion chamber, cylinder block water jacket (33a), cylinder head water jacket (33b), and pump (42). The head jacket and block jacket are supplied with water independently of each other and are therefore substantially independent (figure 7). Passage (38) supplies water from the pump to the block jacket. Left branch passage (38a, 36) and right branch passage (38a, 36) branch from passage (38) and communicate with the head jacket (33b) (column 5, lines 16-24). A portion of the branch passages passes through a gasket face of the block (6) (see figure 6). Yonezawa does not disclose that the branch passages communicate with the head jacket via a gasket face of the cylinder head. A portion of the branch passages passes

from the exhaust jacket (33c) to the head jacket (33b) (figures 4 and 7). The exhaust jacket is inside the exhaust manifold (13L) which is connected to the head (11). It is well known and common to provide a gasket between component parts where a fluid path runs between the parts. Watanabe shows a gasket (36) between exhaust manifold (35) and head (23). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yonezawa by adding a gasket between the exhaust manifold and the head. The motivation would be to prevent leakage of coolant that passes from the exhaust jacket (33c) to the head jacket (33b). The use of a gasket would result in the branch passage communicating with the head jacket via a gasket face of the head.

4. Claim 2, portions (36) of the passages are formed in the block (6) (see figure 6).

5. Claims 4 and 5, Yonezawa shows the engine in an outboard motor. Portions (36) of the passages are formed in mount case (15). Mount case is a support frame supporting the lower face of the engine (figure 6). The portions (36) are formed at mating surfaces of the mount case and block.

Allowable Subject Matter

6. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wells et al. ('265) shows coolant communicating via gasket

faces. Okada ('734) shows an engine with head and block jackets formed in parallel. Branching passages that supply the head jackets are formed in the block. Kunze et al. ('164) shows an engine with head and block jackets formed in parallel.

8. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Wright
Patent Examiner
Art Unit 3617

AW 5/25/04